ECEC 204: Design with Microcontrollers
RTOS

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This assignment asks you to modify the code examples discussed in class to achieve a slightly different functionality. Submit the assignment via BBLearn by September 3, 2021, 11:59 pm.

(**10 points**) Write a multi-threaded program to achieve the following functionality. Create two threads that cooperate as follows:

- *uartThread()* continuously accepts input from the terminal in the form of a character and converts the character into an integer value before passing it to *blinkyThread()* via a message queue for further processing. Perform an error check to ensure that the integer value lies between 2 and 5, inclusive.
- *blinkyThread()* accepts an integer value n from *uartThread()* from the message queue and toggles LED1 n times at a rate of once every second.
- The process repeats indefinitely.

Use the CCS projects titled `multiple_threads` and `thread_comms`, both available via BBLearn, as the starting point for your program. Make sure to do a *clean build* — that is, clean project followed by build project — of the `tirtos_builds` project first to build the RTOS.

Submission Instructions

Once you have implemented all of the required features, submit your code and report by doing the following:

- Run `Clean Project` to remove the executable and object files from the project folder. We must be able to build your projects from source and we don't require your pre-compiled executables or intermediate object files. **If your code does not at the very least compile, you will receive a zero.**
- Zip up the project and upload the zip file using the Blackboard Learn submission link found on the course website.